

REMARKS

This application has been carefully reviewed in light of the Office Action dated April 3, 2008. Claims 18 and 19 are in the application, of which Claim 18 is the sole independent claim. Reconsideration and further examination are respectfully requested.

The Office Action entered a rejection of Claims 1 to 17 under 35 U.S.C. § 103(a), primarily over U.S. Patent 5,671,000 (Hirabayashi), U.S. Patent 5,500,664 (Suzuki), U.S. Patent 5,552,816 (Oda), U.S. Patent 5,619,237 (Inoue), or U.S. Patent 6,908,182 (Nakazawa). Claims 1 to 17 have been cancelled without prejudice or disclaimer of subject matter, and without conceding the correctness of the rejection. In particular, it remains Applicants' opinion that the claimed invention would not have been obvious from the art cited against it, particularly in view of the advantageous effect provided by the claimed length relationship. Applicants further reject the contentions in the Office Action, to the effect that the selection of a position for a joint section and an engage reference portion are mere design expedients, and to the effect that the structure and positioning of the claimed ink cartridge is determined by the structure of the carriage.

Nevertheless, in an effort to advance prosecution, all of Claims 1 to 17 have been cancelled as mentioned above, and new Claims 18 and 19 substituted therefor. Claims 18 and 19 are directed to an ink supply system, and are believed to define subject matter patentable over the art applied against cancelled Claims 1 to 17, as explained in more detail below.

The ink supply system claimed herein is a type referred to as a "pit in" system, and is therefore characterized by an ink cartridge installed in an installation section, such that when the ink cartridge is installed in the installation section, a joint section of the ink cartridge is positioned for connection to and disconnection from an ink drawing member which draws ink from the ink cartridge. Thereafter, the joint section of the ink cartridge may be connected to and disconnected from the ink drawing member by rotation of the ink cartridge about a predetermined rotation center axis in the installation section.

Thus, according to these features of a pit-in supply system, even before connection of the joint section to the ink drawing member, the installation of the ink cartridge to the installation section is completed. More precisely, the joint section is "positioned for connection to and disconnection from" the ink drawing member when the ink cartridge is installed in the installation section, such that the joint section is not connected to the ink drawing member simply by installation of the ink cartridge. Rather, to connect the joint section to the ink drawing member, and to disconnect it therefrom, it is necessary to rotate the ink cartridge about a predetermined rotation center axis in the installation section, and this occurs after installation.

Moreover, when installation of the ink cartridge is completed the joint section of the ink cartridge is accurately positioned in the installation section by virtue of the claimed length relationship of  $L_1 < L_2$ . This is shown in Figures 5A to 5D of the subject application, and was explained in detail at pages 6 through 8 of the Amendment dated December 12, 2007. In particular, and as explained previously, by virtue of the

length relationship of  $L_1 < L_2$ , it is possible to suppress the effect of a wobbling of the ink cartridge in spite of the presence of a deviation amount  $N$  of the joint section.

In contrast to the foregoing structure, all of Hirabayashi, Suzuki, Oda, Inoue and Nakazawa are unconcerned with the pit-in supply system. Rather, in all of these applied patents, the installation of the ink cartridges to the respective installation sections are completed concurrently with connection between an ink supplying section and an ink drawing section. Thus, and unlike the invention herein, when the ink cartridges of the applied references are installed in their respective installation sections, the respective joint sections are not positioned for connection to and disconnection from the corresponding ink drawing members. Moreover, in the applied references, after the ink cartridge is installed in the installation section, there is not possibility of a connection and disconnection of the joint section and the ink drawing member, by rotation of the ink cartridge about a predetermined rotation center axis in the installation section.

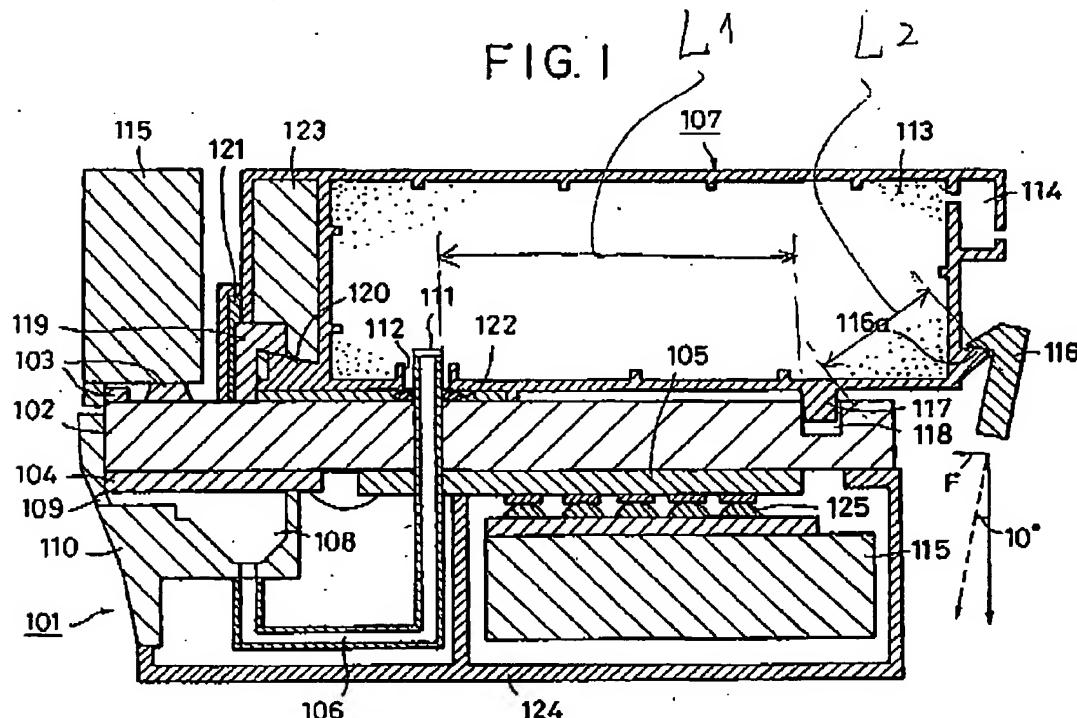
As a consequence, in the applied references, when an installation of the ink cartridge has been completed, the ink supplying section has already been connected to the ink drawing section, such that wobbling of the ink cartridge has no effect on the connection between the ink supplying section and the ink drawing section. For this reason, it is unnecessary for the applied references to consider the effect of wobbling, and to take measures to suppress its effect.

It is therefore apparent that these references also do not disclose the length relationship of  $L_1 < L_2$  as set out in the claimed invention. In fact, it is clear that the  $L_1$

and L2 distances shown in the references have a relationship  $L_1 > L_2$ , which is precisely opposite to that set out in the claims.

The relationship of  $L_1 > L_2$  in the applied patents to Suzuki, Oda, Inoue and Nakazawa has already been demonstrated. Attention is respectfully directed to pages 7 through 11 of the Amendment dated July 27, 2007.

With respect to the newly applied patent to Hirabayashi,  $L_1$  is a distance between an ink supply port 112 and a projection 117, and  $L_2$  is a distance between projection 117 and a portion 116a, as shown in Hirabayashi's Figure 1:



In Hirabayashi, therefore, it is clear that the length relationship between L1 and L2 is L1 > L2, which is precisely opposite to that claimed herein.

It is therefore respectfully submitted that the claims herein define subject matter that would not have been obvious from any of the applied patents to Hirabayashi, Suzuki, Oda, Inoue or Nakazawa, and allowance is respectfully requested.

Applicants' undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

  
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